

In the Claims:

Please cancel Claim 6, without prejudice; and amend Claims 5, 9, 11, 13, 15 and 17 as indicted below. The status of all claims is as follows:

1-4. (Cancelled)

5. (Currently Amended) An apparatus having an execution unit for executing a machine language, compiling a source program into a machine language directly executable by the execution unit, and executing the machine language in a just-in-time-compiler system, comprising:

a storage unit storing for each function a machine language executable by the execution unit obtained by compiling a function described in the source program, and maintaining stored data after the source program has been executed;

a compiling unit compiling the source program into a machine language executable by the execution unit;

a storage control unit storing the machine language compiled by said compiling unit corresponding to update date and time of the source program compiled by said compiling unit;

a determination unit determining whether or not the update date and time of the source program matches an update date and time corresponding to the machine language stored in said storage unit; and

an execution control unit instructing the execution unit to directly execute either a machine language compiled by said compiling unit or a machine language stored in said storage unit depending on a determination result obtained by said determination unit; and

a read unit reading a program file storing the source program, wherein:

said storage control unit stores the machine language in said storage unit by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

said determination unit determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in said storage unit corresponding the machine language;

the stored data are maintained even after the source program has been executed, the execution control unit is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution unit to directly execute the machine language of the function stored in the storage unit without waiting for the compilation of the source program by the compiling unit when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control unit instructs the storage unit to store the machine language compiled by the compiling unit corresponding to the update date and time of the source program compiled by the compiling

unit, the determination unit determines whether or not the update date and time of the source program matches the update date and time stored in the storage unit corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control unit instructs the execution unit to execute the machine language newly compiled by the compiling unit although the machine language obtained by compiling the function used in the source program is stored in the storage unit.

6-8. (Canceled)

9. (Currently Amended) An apparatus having execution means for executing a machine language, compiling a source program into a machine language directly executable by the execution means, and executing the machine language in a just-in-time-compiler system, comprising:

storage means for storing for each function a machine language executable by the execution means obtained by compiling a function described in the source program, and maintaining stored data after the source program has been executed;

compiling means for compiling the source program into a machine language executable by the execution means;

storage control means for storing the machine language compiled by said compiling means corresponding to update date and time of the source program compiled by said compiling means;

determination means for determining whether or not the update date and time of the source program matches an update date and time corresponding to the machine language stored in said storage ~~means;~~ and means;

execution control means instructing the execution means to directly execute either a machine language compiled by said compiling means or a machine language stored in said storage means depending on a determination result obtained by said determination ~~means;~~ means; and

read unit means reading a program file storing the source program, wherein:

said storage control means stores the machine language in said storage means by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

said determination means determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in said storage means corresponding the machine language;

the stored data are maintained even after the source program has been executed, the execution control means is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution means to directly execute the machine language of the function stored in the storage means without waiting for the compilation of the source program by the compiling means when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control means instructs the storage means to store the machine language compiled by the compiling means corresponding to the update date and time of the source program compiled by the compiling means, the determination means determines whether or not the update date and time of the source program matches the update date and time stored in the storage means corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control means instructs the execution means to execute the machine language newly compiled by the compiling means although the machine language obtained by compiling the function used in the source program is stored in the storage means.

10. (Cancelled)

11. (Currently Amended)      A method for executing a program based on a just-in-time-compiler system for compiling a source program into a machine language directly executable on a platform of a specific processing system, and executing the machine language, comprising:

storing the machine language obtained by compiling the source program for each function described in the source program corresponding to an update date and time of the source program before compiled into a machine language;

determining whether or not the date and time of the update of the source program matches an update date and time corresponding to the stored machine ~~language; and~~ language;

setting either the machine language obtained by compiling the source program or the machine language stored in the storage unit to be directly executed on a platform of a specific processing system based on a determination ~~result-~~ result; and

reading, with a read unit, a program file storing the source program, wherein:

a storage control unit stores the machine language in a storage unit by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

a determination unit determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in the storage unit corresponding the machine language;

the stored data are maintained even after the source program has been executed, an execution control unit is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution unit to directly execute the machine language of the function stored in the storage unit without waiting for the compilation of the source program by a compiling unit when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control unit

instructs the storage unit to store the machine language compiled by the compiling unit corresponding to the update date and time of the source program compiled by the compiling unit, the determination unit determines whether or not the update date and time of the source program matches the update date and time stored in the storage unit corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control unit instructs the execution unit to execute the machine language newly compiled by the compiling unit although the machine language obtained by compiling the function used in the source program is stored in the storage unit.

12. (Cancelled)

13. (Currently Amended) A computer-readable storage medium storing a computer program used to direct a computer based on a just-in-time-compiler system to compile a source program into a machine language directly executable on a platform of a specific processing system, and execute the machine language, comprising:

storing the machine language obtained by compiling the source program for each function described in the source program corresponding to an update date and time of the source program before compiled into a machine language;

determining whether or not the date and time of the update of the source program matches an update date and time corresponding to the stored machine language; and  
language;

setting either the machine language obtained by compiling the source program or the machine language stored in the storage unit to be directly executed on a platform of a specific processing system based on a determination ~~result-~~ result; and

reading, with a read unit, a program file storing the source program, wherein:

a storage control unit stores the machine language in a storage unit by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

a determination unit determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in the storage unit corresponding the machine language;

the stored data are maintained even after the source program has been executed, an execution control unit is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution unit to directly execute the machine language of the function stored in the storage unit without waiting for the compilation of the source program by a compiling unit when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control unit instructs the storage unit to store the machine language compiled by the compiling unit corresponding to the update date and time of the source program compiled by the compiling unit, the determination unit determines whether or not the update date and time of the source



program matches the update date and time stored in the storage unit corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control unit instructs the execution unit to execute the machine language newly compiled by the compiling unit although the machine language obtained by compiling the function used in the source program is stored in the storage unit.

14. (Cancelled)

15. (Currently Amended) A computer program embodied on a transmission medium used to direct a computer based on a just-in-time-compiler system to compile a source program into a machine language directly executable on a platform of a specific processing system, and execute the machine language, comprising:

storing the machine language obtained by compiling the source program for each function described in the source program corresponding to an update date and time of the source program before compiled into a machine language;

determining whether or not the date and time of the update of the source program matches an update date and time corresponding to the stored machine ~~language; and~~ language;

setting either the machine language obtained by compiling the source program or the machine language stored in the storage unit to be directly executed on a platform of a specific processing system based on a determination ~~result-~~ result; and

reading, with a read unit, a program file storing the source program, wherein:

a storage control unit stores the machine language in a storage unit by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

a determination unit determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in the storage unit corresponding the machine language;

the stored data are maintained even after the source program has been executed, an execution control unit is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution unit to directly execute the machine language of the function stored in the storage unit without waiting for the compilation of the source program by a compiling unit when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control unit instructs the storage unit to store the machine language compiled by the compiling unit corresponding to the update date and time of the source program compiled by the compiling unit, the determination unit determines whether or not the update date and time of the source program matches the update date and time stored in the storage unit corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control unit instructs the execution unit to execute the machine language newly

compiled by the compiling unit although the machine language obtained by compiling the function used in the source program is stored in the storage unit.

16. (Cancelled)

17. (Currently Amended) A computer data signal embodied in a carrier wave containing a computer program used to direct a computer based on a just-in-time-compiler system to compile a source program into a machine language directly executable on a platform of a specific processing system, and execute the machine language, said computer program comprising:

storing the machine language obtained by compiling the source program for each function described in the source program corresponding to an update date and time of the source program before compiled into a machine language;

determining whether or not the date and time of the update of the source program matches an update date and time corresponding to the stored machine language; and language;

setting either the machine language obtained by compiling the source program or the machine language stored in the storage unit to be directly executed on a platform of a specific processing system based on a determination ~~result.~~ result; and

reading, with a read unit, a program file storing the source program, wherein:

a storage control unit stores the machine language in a storage unit by assuming that the update date and time of the program file indicated in the program file is the update date and time of the source program corresponding to the machine language;

a determination unit determines whether or not the update date and time of the program file indicated in the program file matches the update date and time stored in the storage unit corresponding the machine language;

the stored data are maintained even after the source program has been executed, an execution control unit is able to execute the source program without a time lag caused in the program compiling process when the execution is started by instructing the execution unit to directly execute the machine language of the function stored in the storage unit without waiting for the compilation of the source program by a compiling unit when the same source program is re-executed; and

when the source program executed later does not match that executed previously by an amendment after the update of the source program, the storage control unit instructs the storage unit to store the machine language compiled by the compiling unit corresponding to the update date and time of the source program compiled by the compiling unit, the determination unit determines whether or not the update date and time of the source program matches the update date and time stored in the storage unit corresponding to the machine language, and, when they do not match each other as a result of the determination, the execution control unit instructs the execution unit to execute the machine language newly

compiled by the compiling unit although the machine language obtained by compiling the function used in the source program is stored in the storage unit.

18. (Previously Presented) The apparatus according to claim 5, wherein the machine language compiled for each function stored in the storing unit is stored in RAM.

19. (Previously Presented) The apparatus according to claim 9, wherein the machine language compiled for each function stored in the storage means is stored in RAM.

20. (Previously Presented) The method according to claim 11, wherein the machine language compiled for each function stored in the storage means is stored in RAM.

21. (Previously Presented) The medium according to claim 13, wherein the stored machine language is stored in RAM.

22. (Previously Presented) The computer program according to claim 15, wherein the stored machine language is stored in RAM.

23. (Previously Presented) The computer data signal according to claim 17, wherein the stored machine language is stored in RAM.

24. (Previously Presented) The apparatus according to claim 5, wherein said storage unit also has stored thereon a standard source program compiled from an original source program.

25. (Previously Presented) The apparatus according to claim 9, wherein said storage means also has stored thereon a standard source program compiled from an original source program.

26. (Previously Presented) The method according to claim 11, wherein the storage unit also has stored thereon a standard source program compiled from an original source program.

27. (Previously Presented) The medium according to claim 13, wherein the storage unit also has stored thereon a standard source program compiled from an original source program.

28. (Previously Presented) The program according to claim 15, wherein the storage unit also has stored thereon a standard source program compiled from an original source program.

29. (Previously Presented) The signal according to claim 17, wherein the storage unit also has stored thereon a standard source program compiled from an original source program.